The Digital Dots Wild Format Digital Printing Technology Guides are about providing you with all you need to know about investing in wide format digital printing technology. The Wild Format goal is to create and share objective and independent explanations of key digital production technologies. The Wild Format articles are relevant for all parts of the graphic arts supply chain, especially print buyers and designers. They're for anyone with great ideas who wants to get them into print cost effectively and conveniently.

The Wild Format guides are intended to expand awareness and understanding of the craziness that can be created on wide format digital printing devices, from floors to lampshades and everything in between.

These guides are made possible by a group of manufacturers working together with Digital Dots. Together we hope you enjoy the articles (yes, there will be more) and that you put into practise what you learn. If you want to talk about it, go to our LinkedIn group at ***http://linkd.in/1pkeLH1***

Enjoy and Go Wild!

This is the third article in this part of the Wild Format Series. It is supported by . . .

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Collaborative Colour Production in Wide Format Printing

Wild format digital print buyers love the fact that lead times for their print projects can be shorter and shorter. But the problem for printers is that they must meet these rising expectations whilst simultaneously producing higher and higher quality print. They are also expected to achieve

these high standards on a huge range of demanding substrates. In order to meet customer demands, wide format digital print producers are increasingly working with collaborative production tools.

Printers have several options for improving how they work collaboratively. These range from keeping print buyers and designers informed about the best way to prepare artwork and designs for print production, to software and workflow models that provide better customer support early in production. Some efforts don't need to involve additional software or hardware costs, but rather involve better training of staff and customers. For example prepress staff have great knowledge and expertise in creating documents that are completely print ready. They understand the importance of resolution, colour space, and print specific parameters such as overprint, and correct trapping to image quality. But this knowledge is not always clearly communicated to the print buyer and/or designer.

In most of today's media supply chains, the print buyer or designer produces the design document. The days when print media files were largely created either by special service bureaus or in the prepress department are long gone. What hasn't gone is the need for control over the file creation process. It can be a challenge to communicate what is often quite complex knowledge, but one can get a long way by producing basic file preparation guides for customers. Such guides provide customers with recommendations, which many print buyers appreciate.

Sharing & Caring

Best practice documents developed over time can also be shared with print buyers. Printers can provide them with checklists and FAQs as brochures and on web sites, and provide regular educational events. Workshops and seminars are opportunities for printers and customers to keep up to date with requirements and how best to exploit new services and technologies. Wide format digital printers can for instance combine an Open House event with a presentation of their latest technologies and services in short educational sessions. This will not only help customers to improve the quality of the colour files they submit, but will also help make the workflow more streamlined and efficient. As an extra bonus it should also strengthen customer loyalty and ultimately boost mutual goodwill.

Other ways printers can help customers in the early stages of colour production is to make it easy to upload or transfer artwork. This often consists of very large datafiles, which are not always suitable for sending

via email. A classic way to handle this is to point to an FTP server, but this is quite rudimentary and not a very sophisticated solution. A better approach is to ensure a user friendly interface that automatically links the upload to a job number. This calls for an integration of the prepress system with MIS, so if either lacks the flexibility or capacity for such customisation it's time to look at more advanced and modern solutions. This is of course not a minor investment but an efficient workflow system, and for that matter MIS, is key for streamlined and automated print production. They soon pay back the investment in reduced errors, higher colour quality, faster throughput and greater customer satisfaction.

The upload function should be paired with an efficient preflight solution in order to identify and fix commonly occurring flaws in artwork in the early stages. All popular preflight software has suggested settings for specific types of colour print production based on the Ghent PDF Workgroup recommendations for how to create correct PDF/X files. Not all PDF files are optimised for print production, but correctly prepared and preflighted PDF/X files will significantly reduce the number of faulty PDFs.

More often than not customers have late changes to incoming artwork and pages, so an efficient late binding proofing and approval system benefits both the printer and the print buyer. Softproofing and approval solutions are common on the market, and coupled with high end and calibrated monitors, mean that costly and time consuming hardcopy proofs are no longer necessary. Knowing how to set up monitors for quality softproofing is vital. Printing houses with demanding customers should ensure they use monitors that are good enough for colour critical work. It's also important for all parties to use the same reference standard, and software and hardware for monitor validation.

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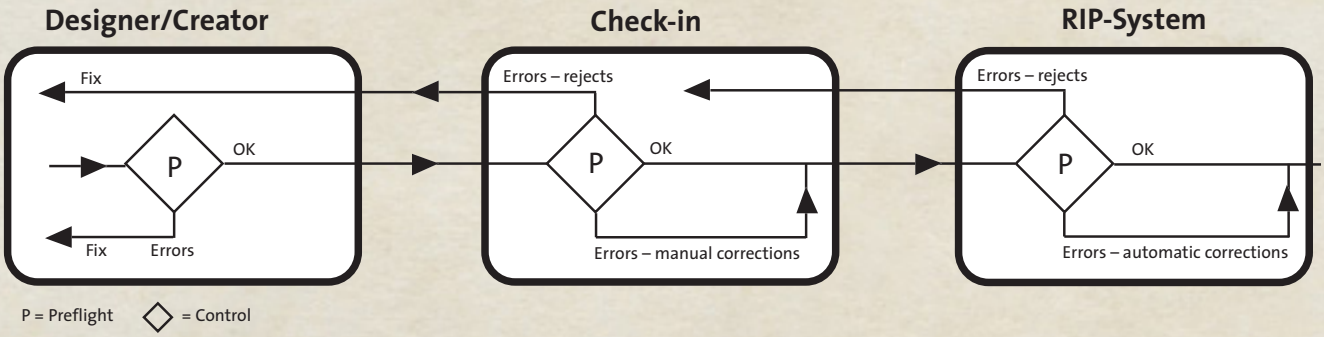
A common choice for monitor reference is ISO 12646 – Displays for colour proofing. Fortunately there several manufacturers of high end monitors which can meet its

In a softproofing and approval system everyone involved in the process can see each others' comments, and it's very clear when a page or sheet is ready for print. Shown here is the Dialogue proofing system from Dalim.

requirements, but BenQ, Eizo and NEC are the leaders. Their products provide true hardware calibration to commonly referenced standards, and come with dedicated software to do it. These types of monitors cost a bit more than a general desktop monitor, but they offer a relatively fast return on investment by reducing the time and expense required for hardcopy proofs and reducing the risk of colour related errors and/or remakes.

Since there are many softproofing systems to choose from, it is useful to setup a specification for what the system should support. For instance it should be able to access the documents in production through some kind of web interface, ideally from a wide range of output devices without compromising system security and file integrity. The softproofing system should also provide an easy to use interface, while still offering all the controls and tools for efficient document approval. Of course a softproofing system needs to integrate seamlessly with the MIS, the workflow and Raster Image Processing (RIP) systems. And finally it must support a colour managed workflow, so that any production team members working at an uncalibrated



The latest point for files to be preflighted is when they are uploaded to the prepress system, but ideally this should happen even earlier on in the workflow. It should be done by the designer before upload.

or nonvalidated monitor are exempted from making colour related comments or changes.

Reaching Out

Another obvious area for improving workflow collaboration is to use dedicated Web-to-Print (WtP) technologies that facilitate print ordering and extend the workflow to remote links in the production chain. Again it's wise to set up a specification of what you expect from a WtP system, especially for colour management and image preparation. This often leads to integration of a Digital Asset Management system (DAM) solution with the WtP and workflow system. This helps customers to build an image and document library, both for new print jobs, but also for repeat orders. Commonly used photos and illustrations, as well as corporate logos can live in such a DAM system, where they are stored with the correct resolutions and colour spaces for different types of print workflows. If any file or colour conversion is required, the DAM system can take care of this, reducing the risk of errors and enhancing overall quality. A good DAM system should also be scalable, SQL compliant, and support metadata for efficient and fast query response.

Pushing the Boundaries

Not all parts of print production can be automated or standardised. Especially in digital wide format production, the need to test and explore printing on new types of substrates is obvious. To help the print buyer get their products quickly to market, the research and development people in a printing company need to work closely with both the customer and suppliers of consumables, such as inks and substrates, and also software providers. What seems impossible to produce to a high standard using one RIP system, might be fully possible in another. A substrate that seems impossible to measure with one manufacturer's spectrophotometer might

be fully possible to measure accurately using another's.

It's important to always save the data if you want to repeat a successful reproduction on a particularly tricky substrate in the future. This includes calibrations, the RIP and printer settings, validation parameters and so on. And continue to follow technical developments closely on all fronts, because staying up to date with technology pays off, especially when customers come up with new and unexpected wild format ideas. Printers, make sure you have some sort of exhibition area so that you can show customers and prospective clients examples of the many different things that you produce for them, including work on new and exciting substrates that showcase different print methods.

Wide format customers don't just expect outstanding print quality. They increasingly expect the finishing and installation of the printed materials be part of the complete service. This service includes not only display print and posters, but also adhesive films that go up on shop windows and their removal when the project ends. The quality of a particular print product can also be influenced by how easy, or not, the substrate is to remove after use. Perhaps services should include both taking down old print, and putting up the new? At least this will provide feedback to print companies as to preferred substrateable based on time savings in installation or removal.

Project management support is an important way printers and print buyers can work together to improve efficiency. Such efforts help everyone to improve profit and investment returns. Printers who expand services to fulfil customer needs beyond print production, are leading growth in wild format applications development.

– Paul Lindström

The Digital Dots team specialises in consulting and editorial for digital prepress, printing and publishing technologies. This includes research, testing, evaluation and content services for publishers, printers and print buyers.

Our Wild Format Series is the latest in a long line of educational projects for graphic arts professionals, including designers and content originators. We also publish Spindrift, a subscriber supported, monthly journal with readers all over the world and a sharp focus on technology.

We work on various ISO committees developing standards for print production and the environment, and we are accredited auditors for ISO 12647-2 and ISO 9001 in the UK and Sweden. You can find out more about us at ***digitaldots.org***.